UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/858,116	05/19/97	MIZUSUGI T	8373.520SF2

IM31/0717

CURTIS B HAMRE
MERCHANT GOULD SMITH EDELL WELTER
AND SCHMIDT
3100 NORWEST CENTER 90 SOUTH SEVENTH ST
MINNEAPOLIS MN 55402

EXAMINER	
GRIFFIN,S	
ART UNIT	**PAPER NUMBER**
1731	31

DATE MAILED: 07/17/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 08/858,116	Applicant(s) Mizusugi et al.
	Examiner Steven P. Griffin	Group Art Unit 1731

☒ Responsive to communication(s) filed on *May 4, 1998* .

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *5-8 and 10* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *5-8 and 10* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____ .

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 10 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seymour 4,229,200 in view of McMaster 4,609,391.

Regarding claims 10 and 5, Seymour essentially discloses the claimed method; see col. 11, line 57 to col. 12, line 31; note that the first vacuum developed in the element 40 (first suction chamber) of Seymour occurs prior to the application of a vacuum in curved shaping blocks 120 (second suction chambers) of Seymour which are located on opposite sides of the first suction chamber 40. Seymour fails to place the glass sheet on a ring mold to place the sheet under the suction mold. Seymour discloses a tempering station 12 for tempering the glass after bending, Seymour fails to discuss the particulars of the tempering steps. McMaster discloses a method for bending glass plates wherein a heated glass sheet (G) is placed onto a ring mold (42) and then the ring mold with the glass plate is moved beneath a suction mold (48) having a shaping surface (50) wherein the mold attracts the glass plate by suction and bends the glass plate, after bending McMaster further discloses that it is conventional to release the bent glass sheet from the suction mold onto a ring (56) for movement of the glass to quench station (24) to temper the glass sheet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a ring mold for transferring the heated glass

sheet under the suction mold as in McMaster in order to provide for an efficient means for moving the heated glass sheet under the bending suction mold and to further use a quench ring as in McMaster in the method of Seymour in order to transfer the bent glass sheet to the quench station for tempering the bent glass sheet. Regarding claim 6, the sheet of Seymour is bent from the central region of the sheet to the side areas of the sheet. Regarding claim 7, Seymour discloses using a stretchable fabric covering such as a knit fiber glass fabric on the shaping surfaces to protect surface of the glass sheets (see col. 5, lines 50-55). Regarding claim 8, Seymour clearly shows the glass sheet as being planar prior to attraction (see Figs. 16-17).

3. Claims 10 and 5-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Seymour in view of Kuster et al. 4,859,225.

Regarding claims 10 and 5, Seymour is applied as above. Seymour fails to place the glass sheet on a ring mold to place the sheet under the suction mold. Seymour discloses a tempering station 12 for tempering the glass after bending, Seymour fails to discuss the particulars of the tempering steps. Kuster '225 discloses a method for bending glass plates wherein a heated glass sheet (9) is placed onto a ring mold (33) and then the ring mold with the glass plate is moved beneath a suction mold (5)

wherein the mold attracts the glass plate by suction and bends the glass plate, after bending Kuster '225 further discloses that it is conventional to release the bent glass sheet from the suction mold onto a ring (support frame 48) for movement of the glass to tempering station (5) to temper the glass sheet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a ring mold for transferring the heated glass sheet under the suction mold as in Kuster '225 in order to provide for an efficient means for moving the heated glass sheet under the bending suction mold and to further use a support frame/ring as in Kuster '225 in the method of Seymour in order to transfer the bent glass sheet to the tempering station for tempering the bent glass sheet. Regarding claim 6, the sheet of Seymour is bent from the central region of the sheet to the side areas of the sheet. Regarding claim 7, Seymour discloses using a stretchable fabric covering such as a knit fiber glass fabric on the shaping surfaces to protect surface of the glass sheets (see col. 5, lines 50-55). Regarding claim 8, Seymour clearly shows the glass sheet as being planar prior to attraction (see Figs. 16-17).

Response to Arguments

4. Applicant's arguments filed 5-4-98 have been fully considered but they are not persuasive. Regarding the argument relating to the 35 USC 112, first paragraph rejection of the claims because of the recitation "complementary to the first area" it is considered that applicant's arguments are not persuasive, particularly it is considered that the page 3, lines 19-27 and page 9, lines 5-13 fail to provide basis for the shaping of the second area of the sheet of glass complementary to the first area, lines 19-27 and 5-13 discuss the shaping of the glass complementary to the surface areas of the molds and not the areas of the sheets complementary to each other as is claimed. It is noted however that the 35 USC 112, first paragraph rejection has been withdrawn, particularly it has been withdrawn in view of the meaning of the work "complementary" taken with the entirety of the disclosure, it is considered that "complementary" means something that completes something to make a whole and in view of the entirety of the disclosure it is considered that the specification provides for the shaping of the second area taken with the shaping of the first area to complete the shaping of the glass sheet. Regarding the argument that Seymour fails to teach the instant invention because Seymour further includes a step of

dropping the glass sheet to further shape the sheet it is considered that the mere fact that Seymour may require a dropping step is irrelevant to the fact that Seymour shapes a glass sheet by first attracting a first area to the shaping mold and then a second area to the mold and in view of this shaping it is considered that when Seymour is taken with either McMaster or Kuster it would suggest to one skilled in the art that a glass sheet can be shaped by attracting first and second areas in sequence to a suction mold and then removing the shaped glass from the molding area to a quenching area and further processing.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened

statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven P. Griffin whose telephone number is (703) 308-1164. The examiner can normally be reached on Monday-Thursday from 6:30 AM-4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stan Silverman, can be reached on (703) 308-3837. All official faxes for this Group should be directed to fax phone numbers (703) 305-3599 or 7718, any unofficial faxes should be directed to fax phone number (703) 305-7115.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Steven P. Griffin

STEVEN P. GRIFFIN
PRIMARY EXAMINER
ART UNIT 1731
7-16-98

SPG
July 16, 1998